

REMARKSStatus of the Claims

Claims 94-102, 106, 107, and 111-130 are currently pending. Claims 1-93, 103-105, and 108-110 have been canceled without prejudice or disclaimer of subject matter claimed therein. New claims 124-130 have been added.

Claims 94-97 and 111 have been withdrawn from consideration as being drawn to a separate species. It is Applicants' understanding that the Examiner intends to begin by searching the elected species and will continue searching until art is found or until a generic claim is found allowable. Applicants also point out that when a generic claim is found to be allowable, the withdrawn claims which depend from or include the limitations of the allowed claim must be rejoined and fully examined for patentability (see MPEP 809).

Amendments to the Claims

The wording of claim 98 has been amended as requested by the Examiner. The amendment of claim 98 does not introduce prohibited new matter.

New claims 124-130 have been added. Representative support for new claims 124-130 can be found in claims 68-74 as originally filed. New claims 124-130 do not introduce prohibited new matter.

Rejection of the Claims Under 35 U.S.C. § 112, Second Paragraph

Claims 98-102, 106, 107, and 112-123 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicants regard as the invention.

The Office Action alleges that the terms "the lengthwise grain" and "the clamped substrate" in claim 98 lack proper antecedent basis. Without acquiescing to the propriety of the rejection but solely to expedite further prosecution of the application, Applicants have amended the claim to overcome the rejection.

Rejection of the Claims Under 35 U.S.C. § 103(a)

A. Claims 98-102, 106, 107, 112, 113, and 118-121 are rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 3,856,219 (Stayton) in view of U.S. Patent

No. 6,755,365 (Meredith).

The Office Action alleges that Stayton and Meredith, taken together teach each and every element of claims 98-102, 106, 107, 112, 113, and 118-121. Applicants respectfully submit that Stayton and Meredith, taken alone or together, do not teach a substrate cutting device of the claimed invention or a method of producing substrate fibers by using a substrate cutting device of the claimed invention.

Applicants respectfully point out that the bone mill of Stayton does not have a cutter containing a blade section for producing substrate fibers. The bone mill of Stayton has a shearing bar for shearing bone between a reinforced shear piece and a shear bar that rams bone material against the shear piece's edge. Stayton discloses, at col. 1, ll. 47-54, that "[s]hear bar 18 runs perpendicularly to [bone supply] channel 14 and is guided by shear channel 20 Forming the lower forward portion of bone supply channel 14 is shear piece 24 with shear edge 26 which interacts with teeth 28 of shear bar 18." Furthermore, in claim 1, Stayton claims "means for reciprocating said [shear] bar to move completely across said bone supply channel for causing the interaction of said teeth [at the end of the shear bar] and the bottom edge of said supply channel against a bone to shear the bone into controlled size fragments." Thus, Stayton teaches shearing a piece of bone between shear edge 26 and the end of the shear bar 18. The shear bar 18 acts much like a battering ram as it forces the bone against the shear edge 26, causing the bone to fragment. Accordingly, the shearing bar in the bone mill of Stayton is different from the cutter of the presently claimed apparatus, and Stayton does not teach a method of using the claimed substrate cutting device for producing substrate fibers.

Likewise, the bone grinder of Meredith does not have a cutter containing a blade section for producing substrate fibers and Meredith does not disclose a method of producing substrate fibers. The cutting elements in the bone grinder of Meredith grind bone into powder. Therefore, the cutting elements in the bone grinder of Meredith do not contain a blade section for producing substrate fibers. Accordingly, the cutting elements of Meredith are different from the cutter of the presently claimed apparatus.

New claims 124-130 directly or indirectly depend from claim 98 and include all the features of claim 98. Thus, the cited references neither disclose the claimed invention nor render the claimed invention obvious.

B. Claims 114, 116, 117, 122, and 123 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Stayton in view of Meredith and further in view of U.S. Patent Application Publication 2006/0024656 (Morris).

The Office Action alleges that Stayton and Meredith disclose the claimed method except for plasticizing, freezing, or combining the substrate with glycerol prior to cutting. However, as discussed above, Stayton and Meredith do not teach the claimed method and the teachings of Morris do not overcome the deficiencies of Stayton and Meredith because Morris neither discloses the claimed substrate cutting device nor teaches a method of producing substrate fibers. Thus, the cited references neither disclose nor render the claimed invention obvious.

C. Claim 115 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Stayton in view of Meredith and further in view of U.S. Patent No. 4,637,931 (Schmitz).

The Office Action alleges that Stayton and Meredith disclose the claimed method except for freeze drying the substrate. However, as discussed above, Stayton and Meredith do not teach the claimed method and the teachings of Schmitz do not overcome the deficiencies of Stayton and Meredith because Schmitz neither discloses the claimed substrate cutting device nor teaches a method of producing substrate fibers. Thus, the cited references neither disclose nor render the claimed invention obvious.

Conclusion

The foregoing amendments and remarks are being made to place the application in condition for allowance. Applicants respectfully request entry of the amendments, reconsideration, and the timely allowance of the pending claims. A favorable action is awaited. Should an interview be helpful to further prosecution of this application, the Examiner is invited to telephone the undersigned.

If there are any additional fees due in connection with the filing of this response, please charge the fees to our Deposit Account No. 50-0310. If a fee is required for an extension of time under 37 C.F.R. §1.136 not accounted for above, such an extension is requested and the fee should also be charged to our Deposit Account.

Respectfully submitted,
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Date: April 1, 2009
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